

9 MALS

155544

N900040100

Setup Start *NS1*

Stop *NS2*

Start Date: 1/6/2017 **Start Qty:** 4.00 ***4***

Cust Item ID:

Required Date: 1/17/2017 **Req'd Qty:** 4.00 ***1***

Customer:

Run Start *NR1*

Approvals: _____ **Process Plan:** DAS **Date:** JAN 18 2017

Tooling: _____ **Date:** _____

QC: 9-89 Date: _____ SPC (Y/N): _____ Date: _____

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
-----------------	---------------------

D2161 B2

IIN-D212-580-1

B

DAS 6

FEB 24 2017

DAS
21
9-89

17-02-22

100

Document Control

9-89

0.00

100

DOCUMENT CONTROL

4 DAS 28 9-89

MAR 07 2017

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and create labels as per PPP D212-580-041 CHG004

160

Pick Kit

0.00

160

Packaging

Memo

0.00

Packaging

✓ DAS
6
9-89

FEB 27 2017 DAS
27
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER :			

Work Order ID 155544

Tuesday, January 17, 2017 11:25:56 AM

155544

Page 2

Item ID: D212-580-041

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: Dual Cargo Mirror Installation

Start Date: 1/6/2017 Start Qty: 4.00

4

Cust Item ID:

Required Date: 1/17/2017 Req'd Qty: 4.00

4

Customer:

Reference:

Approvals:

Process Plan: _____

Date: _____

Tooling: _____

Date: _____

Run Start

NR1

QC: _____

Date: _____

SPC (Y/N): _____

Date: _____

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170	QC4- 100% Inspect kits for completeness	0.01							
170									
QC	Memo	0.02				4	DAS 28 9-89		MAR 07 2017
Quality Control									
180	Packaging	0.00							
180									
Packaging	Memo	0.00				4	DAS 28 9-89		MAR 07 2017
Packaging	Identify and pack for shipping as per PPP D212--580-041 LOCATION: FG010								
190	QC21- Final Inspection - Work Order Release	0.02							
190									
QC	Memo	0.07					DAS 21 9-89		MAR 07 2017
Quality Control									

DAS
21
9-89

MAR 07 2017

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____	DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐	AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐			
Date :	Step #:	QTY Effective :		MRB (QSI042) Approval	
Description Work Order Deviation		Disposition			
				Completed By	
				Lead hand / Supervisor Approval Verification	
				QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY			
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐
Past Expiry Date ☐	Manufacturing Process ☐				
Misidentified ☐	Past Due ☐	OTHER :			

Picklist Print

Tuesday, January 17, 2017 11:25:55 AM

Page 1

Work Order ID: 155544

155544

Parent Item: D212-580-041

D212-580-041

Parent Item Name: Dual Cargo Mirror Installation

Start Date: 1/6/2017

Required Date: 1/17/2017

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:H Removed D2013-3/-4 06-03-22 JLM
 IPP REV:I AS PER ECN10-611 10-09-07 JLM VERIFIED
 BY:DD IPP rev:J
 10.11.22 AS PER ECN10-642 DD VERF:JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3439-101 *D3439-101* Mirror Assembly 8"		Manufactured	No			100	Each	5.0000	2	8			DAS 27 9-89
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST			5					
					144147			5					
D2161-212 *D2161-212* Mirror Bracket, 212		Manufactured	No			100	Each	0.0000	1	4			DAS 27 9-89
MS20426AD3-4 *MS20426AD3-4* RIVET		Purchased	No			100	Each	8,848.000	8	32			DAS 27 9-89
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					GA			4885					
					m136444			4885					
					ST312			3963					
					m134294			3963					
D4164-041 *D4164-041* Nut Plate Adapter Assembly		Manufactured	No			100	Each	27.0000	4	16			DAS 27 9-89
					<u>Location</u>			<u>Loc Qty</u>		<u>Loc Code</u>			
					ST088			27					
					145726			27					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS <table style="width:100%; border: none;"> <tr> <td style="border: none;">Skid-tube ☐</td> <td style="border: none;">Cross tube ☐</td> <td style="border: none;">Water Jet ☐</td> <td style="border: none;">Engineering ☐</td> </tr> <tr> <td style="border: none;">Machining ☐</td> <td style="border: none;">Small Fab ☐</td> <td style="border: none;">Prod. Eng. Coord. ☐</td> <td style="border: none;">Quality ☐</td> </tr> <tr> <td style="border: none;">Thermoforming ☐</td> <td style="border: none;">Finishing ☐</td> <td style="border: none;">Rec/Store/Packaging ☐</td> <td style="border: none;">Other ☐</td> </tr> <tr> <td style="border: none;">Large Fab ☐</td> <td style="border: none;">Composite ☐</td> <td style="border: none;">Supplier ☐</td> <td></td> </tr> </table>						Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐	Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐	Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐	Large Fab ☐	Composite ☐	Supplier ☐	
Skid-tube ☐	Cross tube ☐	Water Jet ☐	Engineering ☐																						
Machining ☐	Small Fab ☐	Prod. Eng. Coord. ☐	Quality ☐																						
Thermoforming ☐	Finishing ☐	Rec/Store/Packaging ☐	Other ☐																						
Large Fab ☐	Composite ☐	Supplier ☐																							
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																		
Description Work Order Deviation				Disposition																					
								Completed By																	
								Lead hand / Supervisor Approval Verification																	
								QC / QA Coordinator Approval																	
Root Cause		FAULT CATEGORY																							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Mislabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐	OTHER : ☐																			

Picklist Print

Tuesday, January 17, 2017 11:25:55 AM

Page 2

Work Order ID: 155544

155544

Parent Item: D212-580-041

D212-580-041

Parent Item Name: Dual Cargo Mirror Installation

Start Date: 1/6/2017

Required Date: 1/17/2017

Start Qty: 4.00

Required Qty: 4.00

MS27039-1-08

Purchased

No

100

Each

377.0000

4

16

MS27039-1-08

Screw

**

DAS
6
9-89

FEB 27 2017

DAS
27
9-89

DAS
28
9-89

Location

Loc Qty

Loc Code

FP001

274

m136047

274

GA

89

m128636

89

ST281

14

m135864

14

16

DQA: _____ Date: _____



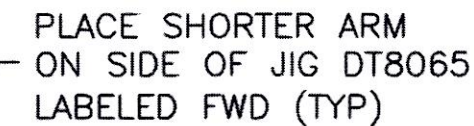
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coor. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :				MRB (QSI042) Approval Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Description Work Order Deviation				Disposition					
Root Cause		FAULT CATEGORY							
Environment ☐	☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐			
Design ☐	☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐			
Doc/Data ☐	☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐			
Equip/Tooling ☐	☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐			
Handling/Pre ☐	☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐			
Material ☐	☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐			
Internal Transport ☐	☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐			
Tribal Knowledge ☐	☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐			
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Substation ☐	☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐			
Past Expiry Date ☐	☐	Manufacturing Process ☐	OTHER :						
Misidentified ☐	☐	Past Due ☐							

NO. 155544
MLJ
17-01-18



D2037-101 
~~D2037~~ WELD FLAT
 - END PARALLEL TO
 THE SHORT ARM

DETAIL OF D2161-204
DETAIL OF D2161-205
DETAIL OF D2161-212

FINISH: ~~POWDER COAT ASSEMBLY BLACK~~
~~CRINKLE (4.3.5.3) PER DART QSI 005 4.3~~
 POWDER COAT BLACK SANDTEX (4.3.5.7) PER
 DART QSI 005 4.3 B

DESIGN JB		UNKNOWN BY	DART AEROSPACE LTD HAMKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>RT</i>	DRAWING NO. D2161	REV. B SHEET 1 OF 1	
DATE 99.06.07		TITLE MIRROR BRACKET	SCALE NTS	
A	93.04.29	NEW ISSUE		
B	99.06.07	REDRAWN FOR CLARITY ADDED -204/-205/-212 DESIGNATIONS		
B1	99.06.07	CHANGE FINISH		
B2	99.06.14	D2037-101 W/	DRAFTED	

RELEASED
KE 99-06-10

DART

4.0 PARTS LIST

REFERENCE ONLY

Qty 562 -041	Qty 563 -041	Qty 580 -041	Part Number	Description
X			D204-562-041	DUAL MIRROR INSTALLATION
	X		D205-563-041	DUAL MIRROR INSTALLATION
		X	D212-580-041	DUAL MIRROR INSTALLATION
2	2	2	D3439-101	MIRROR (WAS D2011-103)
1			D2161-204	MIRROR BRACKET
	1		D2161-205	MIRROR BRACKET
		1	D2161-212	MIRROR BRACKET
*2	*2	*2	D3015-3	LOCKNUT
*2	*2	*2	AN960JD516	WASHER
		8	MS20426AD3-4	RIVET, COUNTERSUNK
		4	D4164-041	NUT PLATE ASSEMBLY
4	4	4	MS27039-1-08	SCREW

* PARTS ARE INCLUDED WITH D3439-101 MIRROR

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Revision: **B**

Date: 12.06.13